



NORTH DAKOTA
DEPARTMENT *of* HEALTH

SMALLPOX

ABOUT THE VACCINE

The Smallpox Vaccine

The smallpox vaccine helps the body develop immunity to smallpox. The vaccine does not contain the smallpox virus and cannot give you smallpox.

The smallpox vaccine contains the “live” vaccinia virus — not dead virus like many other vaccines. For that reason, the vaccination site must be cared for carefully to prevent the virus from spreading. Also, the vaccine can have side effects.

Currently, the United States has enough smallpox vaccine to vaccinate everyone in the country who might need it in the event of an emergency. Production of new vaccine is underway.

Length of Protection

Smallpox vaccination provides high level immunity for three to five years and decreasing immunity thereafter. If a person is vaccinated again later, immunity lasts even longer.

Historically, the vaccine has been effective in preventing smallpox infection in 95 percent of those vaccinated. In addition, the vaccine was proven to prevent or substantially lessen infection when given within a few days of exposure. It is important to note, however, that at the time when the smallpox vaccine was used to eradicate the disease, testing was not as advanced or precise as it is today, so there may still be things to learn about the vaccine and its effectiveness and length of protection.

Receiving the Vaccine

The smallpox vaccine is not given with a normal needle. It is not a shot as most people have experienced. The vaccine is given using a two-pronged needle that is dipped into the vaccine solution. When removed, the needle retains a droplet of the vaccine. The needle is used to prick the skin a number of times in a few seconds. The pricking is not deep, but it will cause a sore spot and one or two droplets of blood to form. The vaccine usually is given in the upper arm.

If the vaccination is successful, a red and itchy bump develops at the vaccine site in three or four days. In the first week, the bump becomes a large blister, fills with pus and begins to drain. During the second week, the blister begins to dry up and a scab forms. The scab falls off in the third week, leaving a small scar. People who are being vaccinated for the first time have a stronger reaction than those who are being revaccinated.

Vaccine Safety

Some people are at greater risk for serious side effects from the smallpox vaccine. **Individuals who have any of the following conditions, or who live with someone who does, should NOT get the smallpox vaccine unless they have been exposed to the smallpox virus:**

- Eczema or atopic dermatitis. (This is true even if the condition is not currently active, is mild or was experienced as a child.)
- Skin conditions such as burns, chickenpox, shingles, impetigo, herpes, severe acne or psoriasis. (People who have any of these conditions should not get the vaccine until they have completely healed.)
- Weakened immune system. (Cancer treatment, an organ transplant, HIV or medications to treat autoimmune disorders and other illnesses can weaken the immune system.)
- Pregnancy or plans to become pregnant within one month of vaccination.

In addition, individuals should not get the smallpox vaccine if they:

- Have been diagnosed by a doctor as having a heart condition with or without symptoms OR if they have three or more cardiac risk factors.
- Are allergic to the vaccine or any of its ingredients.
- Are younger than 12 months of age. However, the Advisory Committee on Immunization Practices (ACIP) advises against non-emergency use of smallpox vaccine in children younger than 18 years of age.
- Have a moderate or severe short-term illness. (These people should wait until they are completely recovered to get the vaccine.)
- Are currently breastfeeding.

Again, people who have been directly exposed to the smallpox virus should get the vaccine, regardless of their health status.

Don't Hesitate!

If offered the smallpox vaccine, individuals should tell their immunization provider if they have any of the above conditions, or even if they suspect they might.

For more information, call the North Dakota Department of Health at 701.328.2378.

